IN THE CLAIMS:

Please amend claims 1 and 4-5 as follows:

1. (Currently Amended) A head slider having an air inlet end and an air outlet end, comprising:

a rail having a flat air bearing surface for generating a floating force when the disk rotates, said rail being disposed on a disk-facing surface; and

an electromagnetic transducer disposed near said air outlet end where said rail is positioned;

said head slider having a cavity on the air outlet end near said electromagnetic transducer between the transducer and a rearmost portion of the head slider.

2. (Original) A head slider according to claim 1, wherein said cavity is approximated by a curved surface that is represented by:

$$z = f(x) \cdot g(y)$$

where z represents the depth of the cavity, x the position thereof in the longitudinal direction of the head slider, y the position thereof in the transverse direction of the head slider, $f(x) = a_m x^m + a_{m-1} x^{m-1} + \cdots + a_1 x + a_0$, $g(y) = b_n y^n + b_{n-1} y^{n-1} + \cdots + b_1 y + b_0$, and m and n are an integer of 2 or greater.

3. (Original) A head slider according to claim 2, wherein said cavity is approximated by a curved surface which is represented by an equation which is similar to said equation except that at least one of f(x) and g(y) is replaced with a sine function.

4. (Currently Amended) A head slider according to claim 1, wherein an amount of material of the head slider that would completely fill said cavity ~~is formed by removing~~ corresponds to a portion of the head slider which ~~projects~~ would project from the disk-facing surface if said cavity were not present when a predetermined voltage is applied to said electromagnetic transducer.

5. (Currently Amended) A head slider according to claim 1, wherein an amount of material of the head slider that would completely fill said cavity is ~~formed by removing~~ corresponds to a portion of the head slider which ~~floats~~ would float less than said electromagnetic transducer if said cavity were not present when a predetermined voltage is applied to said electromagnetic transducer while said head slider is normally floating.

6. (Original) A head slider having an air inlet end and an air outlet end, comprising:

a front rail disposed on a disk-facing surface adjacent to the air inlet end and having a flat air bearing surface for generating a floating force when the disk rotates;

a pair of rear rails disposed on the disk-facing surface adjacent to the air outlet end and each having respective flat air bearing surfaces for generating a floating force when the disk rotates;

a groove defined downstream of said front rail for expanding air once compressed by said front rail to develop a negative pressure; and

a plurality of pads disposed on said front rail and at least one of said pair of rear rails;

said head slider having a cavity on the air outlet end near said electromagnetic transducer.

7. (Original) A method of manufacturing a head slider having an electromagnetic transducer near an air outlet end, comprising the steps of:

applying a predetermined voltage to said electromagnetic transducer; and

polishing off a portion of the head slider which projects from a disk-facing surface when a predetermined voltage is applied to said electromagnetic transducer.

8. (Original) A method of manufacturing a head slider having an electromagnetic transducer near an air outlet end, comprising the steps of:

rotating a polishing member at a predetermined rotational speed;

causing the head slider to flow with an airflow which is generated when the polishing member is rotated;

applying a predetermined voltage to said electromagnetic transducer; and

polishing off a portion of the head slider which projects from a disk-facing surface and a portion of the head slider which floats less than said electromagnetic transducer when said predetermined voltage is applied to said electromagnetic transducer.

9. (Previously Presented) A disk drive comprising:

a housing;

an actuator arm rotatably mounted in said housing'

a suspension fixed at a base end portion thereof to a front end portion of said actuator arm;

a head slider mounted on a front end portion of said suspension, said head slider having an air inlet end and an air outlet end;

said head slider comprising:

a rail having a flat air bearing surface for generating a floating force when the disk rotates, said rail being disposed on a disk-facing surface; and

an electromagnetic transducer disposed near said air outlet end where said rail is positioned;

said head slider having a cavity on the air outlet end near said electromagnetic transducer.

10. (Previously Presented) A disk drive according to claim 9, wherein said cavity is approximated by a curved surface that is represented by:

$z = f(x) \cdot g(y)$

where z represents the depth of the cavity, x the position thereof in the longitudinal direction of the head slider, y the position thereof in the transverse direction of the head slider, $f(x) = a_m x^m + a_{m-1} x^{m-1} + \cdots + a_1 x + a_0$, $g(y) = b_n y^n + b_{n-1} y^{n-1} + \cdots + b_1 y + b_0$, and m and n are an integer of 2 or greater.

11. (Previously Presented) A disk drive according to claim 10, wherein said cavity is approximated by a curved surface which is represented by an equation which is similar to said equation except that at least one of f(x) and g(y) is replaced with a sine function.

12. (Previously Presented) A disk drive according to claim 9, wherein said cavity is formed by removing a portion of the head slider which projects from the disk-facing surface when a predetermined voltage is applied to said electromagnetic transducer.

13. (Previously Presented) A disk drive according to claim 9, wherein said cavity is formed by removing a portion of the head slider which floats less than said electromagnetic transducer when a predetermined voltage is applied to said electromagnetic transducer while said head slider is normally floating.

14. (Previously Presented) A disk drive comprising:

a housing;

an actuator arm rotatably mounted in said housing;

a suspension fixed at a base end portion thereof to a front end portion of said actuator arm'

a head slider mounted on a front end portion of said suspension, said head slider having an air inlet end and an air outlet end;

said head slider comprising:

a front rail disposed on a disk-facing surface adjacent to the air inlet end and having a flat air bearing surface for generating a floating force when the disk rotates;

a pair of rear rails disposed on the disk-facing surface adjacent to the air outlet end and each having respective flat air bearing surfaces for generating a floating force when the disk rotates;

a groove defined downstream of said front rail for expanding air once compressed by said front rail to develop a negative pressure; and

a plurality of pads disposed on said front rail and at least one of said pair of rear rails;

said head slider having a cavity on the air outlet end near said electromagnetic transducer.